PRELIMINARY SUMMARY OF INFORMATION

SUBMITTED TO THE COMMISSION ON CHICAGO LANDMARKS IN OCTOBER 2002

CHICAGO HARBOR LIGHTHOUSE

LOCATED AT THE SOUTH END OF THE NORTH BREAKWATER, NORTH SIDE OF THE CHICAGO HARBOR ENTRANCE

BUILT: 1893 (CONICAL TOWER)
1917-18 (TOWER RECONSTRUCTED ON ITS PRESENT SITE, BASE BUILDINGS CONSTRUCTED)

ARCHITECT: UNKNOWN

On a clear day, the image of the Chicago Harbor Lighthouse with its crisp white conical tower rising between two red-roofed buildings set against a background of deep blue is a beautiful and familiar sight along Chicago's northern shoreline. At nightfall the red rays of the lighthouse's beacon continue to serve as a distinct visual feature marking the harbor's location on the shore of Lake Michigan. A symbol of the historically important role of the shipping industry in the development of the Chicago, the piercing rays of the Chicago Harbor Lighthouse's beacon guided ships through storms and darkness to the safety of the mouth of the Chicago River, which served as the city's harbor.

Since 1893, the Chicago Harbor Lighthouse, along with five other historic lighthouses (located outside the boundaries of Chicago along the Illinois shore), played a significant role in the history of Chicago and the lower Lake Michigan basin by transforming the southern end of the lake from a treacherous shore to a reliable artery of commerce. Of these early lighthouses only the Grosse Point Lighthouse in Evanston and the Chicago Harbor Lighthouse remain. Located near the mouth of the Chicago River, the

Chicago Harbor Lighthouse symbolically marks the historically pivotal point where the United States' maritime transportation network connected the East Coast, the Great Lakes, and ultimately the Gulf Coast creating one of America's most commercially important and highly traveled corridors over water.

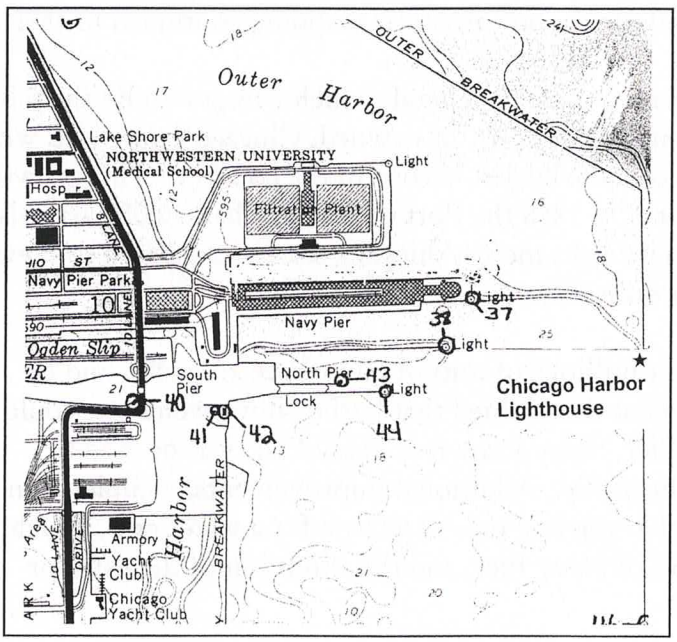
The brick-lined cast iron tower of the Chicago Harbor Lighthouse was built in 1893 on a site just north of its present location. During this time, it was not unusual for light towers to be moved when changes to harbors or shorelines required the relocation of the structures. In 1917, following the extension of the north arm of the breakwater that lies just east of Navy Pier, the lighthouse tower was moved to its present location atop its reinforced concrete base. Once the tower was reconstructed, the single-story red-roofed base buildings adjoining the tower were erected.

CHICAGO'S MARITIME HISTORY

Exploration and mapping of the region that was to become Chicago began in the 17th century as French voyageurs opened trade networks with Native Americans that took them through the Great Lakes. Travel through the Great Lakes increased over the late 1700s and the early 1800s as trade networks moved westward. Most important to the growth and development of Chicago as gateway for maritime trade activities was the completion of the Erie Canal in 1825 and the Illinois and Michigan Canal in 1848. Together, these waterways created an inland shipping transportation network that connected the Atlantic Seaboard with the Great Lakes and Mississippi River south to the Gulf Coast. The result was a tremendous boom in the shipping industry, which relied on Chicago's harbor and shipping lanes in and out of the city to transport goods.

In the early 1830s, the Chicago River was predominately navigated by traders in small ships. In 1832, the federal government constructed the region's first lighthouse, or "light" as they are commonly called, on the banks of the Chicago River. Unfortunately, larger vessels could not reach the harbor entrance, since most were blocked from safe anchorage by a sand bar. As a result of the harbor's position at the foot of the lake, wave action driven by northeast winds would drive sand into the southern shore, keeping the waters shallow at the river's entrance. Schooners and large vessels anchored off shore, often as far as a mile away, and ferried their cargos and passengers ashore in small boats. Responding to this problem, the Federal Government appropriated $25,000 for improvements to the harbor in 1833. After six years of improvements, including the dredging of a channel from the deep lake water to the mouth of the Chicago River and constructing two piers flanking the channel, were completed, the river was opened to large vessels laden with cargo.

A symbol of the historically important role of the shipping industry in the development of Chicago, the Chicago Harbor Lighthouse (right) has guided ships to the mouth of the Chicago River for over a century. The conical tower was constructed in 1893 and was moved to its present location in 1917. By 1918 the light's adjoining buildings were completed.



For over seventy-five years, the lighthouse has stood on at the southern end of the north breakwater, southeast of Navy Pier.

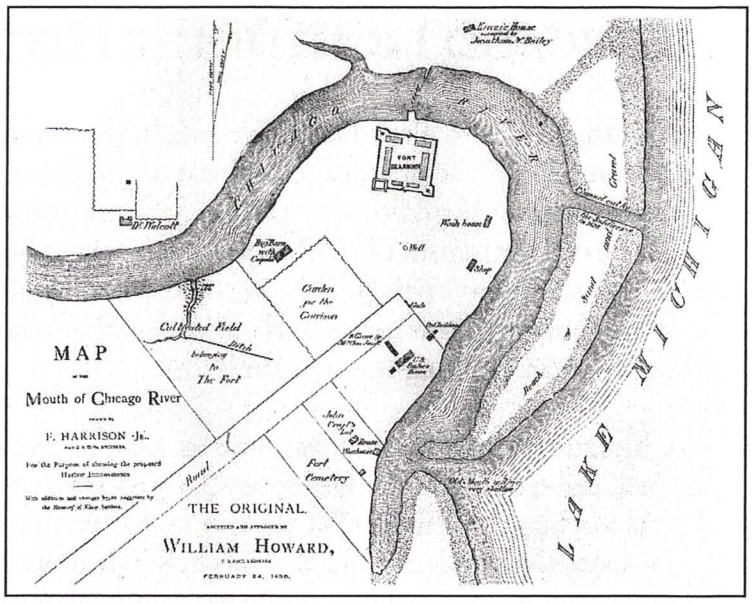
Even with the 1832 land-based lighthouse, the lake's curved shoreline and the harbor's inland site made it difficult for early sailors to spot the harbor's entry from the distant shipping lanes. Frequently, ships bound for Chicago missed the port, resulting in a loss of time and money. During the day, navigation to the harbor was most effectively accomplished by guiding boats to Grosse Point— a promontory of land in Evanston that was, at the time, the most visible geographic feature north of Chicago— and following the shoreline into the harbor.

Shipping traffic on Lake Michigan greatly expanded during the late 1830s, and by the time of the city's incorporation in 1836, Chicago had grown to be the Great Lakes' largest and most important port. Digging of the I&M Canal began in 1836, but the waterway that linked the prairie with the Great Lakes was not completed until 1848. With the I&M Canal, millions of tons of corn, wheat, and lumber from the western states would pass through Chicago to the Great Lakes and onto the northeast and Europe. Inbound vessels brought new immigrants and supplies needed to build the rapidly expanding town. Providing an easy portage to the expanding network of interconnected waterways, Chicago's harbor along with its growing status as a major hub of railroads played a significant role in the subsequent development of the interior of the United States.

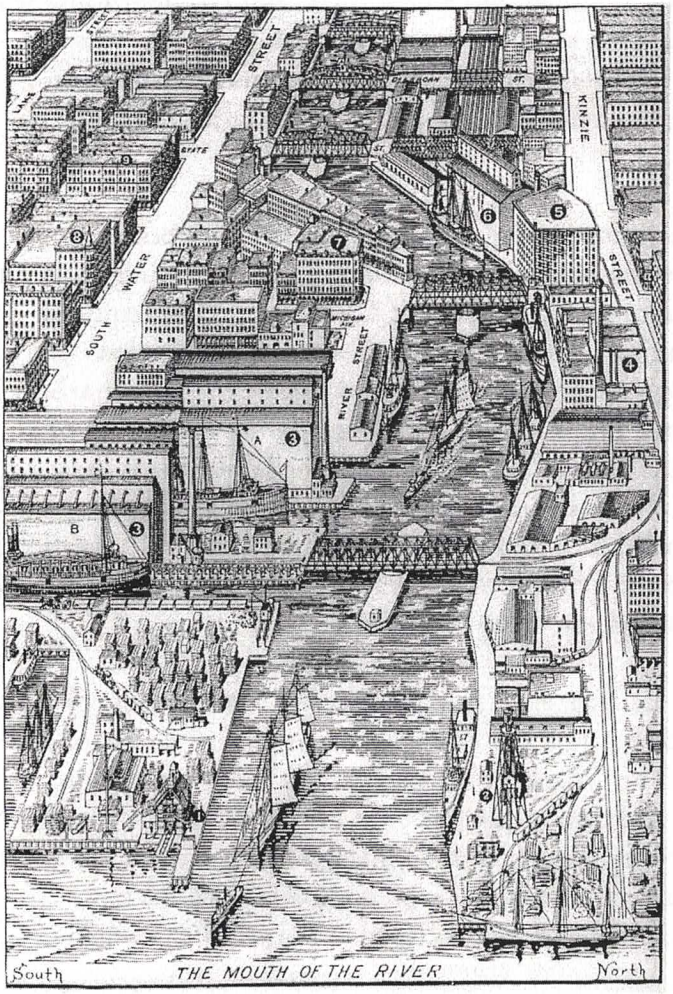
Passenger traffic in the mid-nineteenth century also grew as a result of the network of waterways. As the interior of the country was settled and the demand for travel increased, the people of means began seeking transport on sailing vessels and later, steamships. By 1847 the maritime industry was boasting that travel time from Buffalo to Chicago, using a combination of railroad and ship, could be accomplished in three days (less than half the time the trip would have taken by steamship just five years before). In the years that followed, railroads took most of the passenger traffic away from the Great Lakes steamers and canals, but maritime shipping continued to thrive.

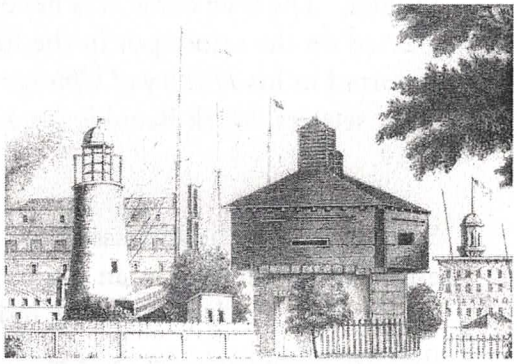
Chicago was the leader of Great Lakes trade in general, which had grown by the Civil War to $600,000,000 in value annually. As the 1870s dawned, Chicago's port vied with New York City and San Francisco as the busiest harbor in the country. This growth continued over the next decade, and by 1888 the Port of Chicago had 20,000 arrivals and departures of major vessels in its eight-month shipping season compared to New York's 23,000 over an entire 12-month season.

Chicago's port continued to attract millions of tons of commerce annually, and by 1910, the city and federal government determined that harbor improvements would be undertaken. In 1916, Municipal Pier, today known as Navy Pier, was opened to handled both passenger and freight traffic. Additional improvements, completed in 1917, included the construction of a concrete superstructure for a water crib, which stood 2300 feet from the outer end of Navy Pier, and the extension of the exterior breakwater.



In the early 1830s, the Chicago River was predominately navigated by traders in small ships. Larger vessels were blocked from entering the harbor by the large sand bar (shown in the map to the right).





The region's first lighthouse (above) was constructed in 1832 on the banks of the Chicago River near Fort Dearborn to facilitate navigation of the treacherous shore.

Following harbor improvements in 1836 and the completion of the Illinois and Michigan Canal in 1848, Chicago's maritime industry began to thrive. Together these waterways created a shipping network that connected the prairie with the Great Lakes. Chicago quickly grew to be one of the largest and most important ports in the country, as seen in this Rand & McNally lithograph, c. 1870 (left). The 1859 lighthouse is seen on the north side of the river.

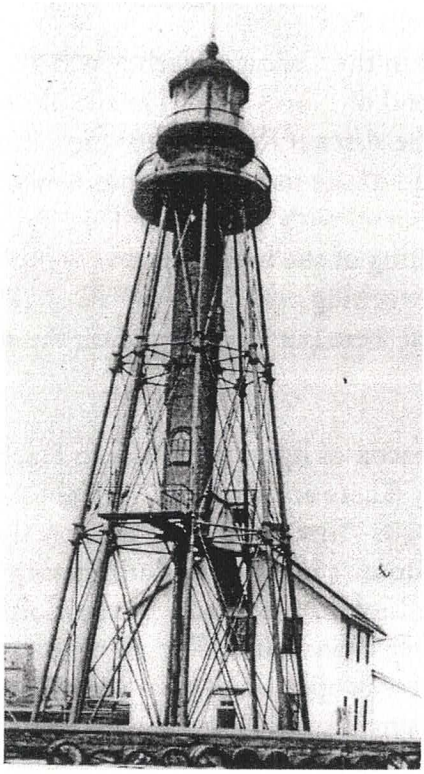
CHICAGO LIGHTHOUSE HISTORY

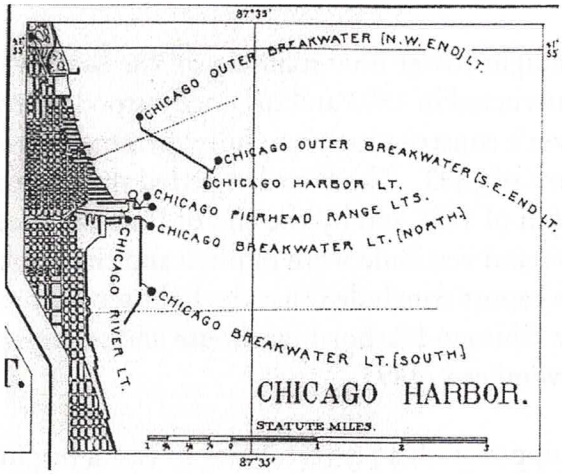
Lighthouses have played an active role in the commercial and maritime life of the nation. It was the practical usefulness of lighthouses that necessitated their construction. In addition to saving lives and property, lighthouses stimulated trade. The first lighthouses in the United States where built in port cities, such as Boston (1716) and New York (1769). Recognizing the lighthouse's important role in the development of commerce and industry, other coastal communities and lakeshore ports began building the structures.

Chicago's first lighthouse was built in 1831 on the south bank of the Chicago River in close proximity to Fort Dearborn (located at what is now the corner of Wacker Drive and Michigan Avenue). On the day of its opening the lighthouse collapsed. Samuel Jackson, the builder of the 50-foot-high lighthouse, attributed the disaster to a layer of quicksand below the light, while the public blamed the inferior materials used by the builder. The true cause was never determined, but a new forty-foot tall lighthouse was erected on the same spot in the following year. Chicago historian A.T. Andreas reported in his *History of Chicago 1670-1847* that one of Chicago's most important early settlers, Mark Beaubien, served as a keeper of the 1832 lighthouse from 1855 to 1859.

Since that time, lighthouses have facilitated navigation into the city's harbor establishing Chicago as an important commercial and economic center of the Midwest. As the lucrative lake shipping industry grew, the Port of Chicago quickly required more guiding beacons. Congress authorized the construction of two piers that extended through sandbars plaguing the entry of the Chicago River from the harbor. Following the extension of the North Harbor Pier, a new lighthouse consisting of a metal-skeleton tower was built in 1859 to replace the earlier pier light. With the great success of the port, however, came clouds of thick black smoke from the growing industries that developed around the harbor and the numerous steamships that called on the port. By 1870 the air was so thick with smoke that the relatively small skeleton tower on North Harbor Pier and its beacon were obscured.

To provide additional navigational assistance for mariners sailing into the port of Chicago, a new leading light was constructed in 1874 at Grosse Point in Evanston, 12 miles north of the 1859 pier light. The Grosse Point Lighthouse aided navigation along Lake Michigan's shoreline in addition to the tower at North Harbor. The North Harbor tower remained the primary lighthouse in the Chicago Harbor until 1893 when a new brick-lined cast iron tower was built. Upon completion of the new lighthouse, the 1859 light was dismantled and sent to Rawley Point in Wisconsin.





A metal-skeleton lighthouse (left) was constructed in 1859 to replace the earlier pier light. While thick smoke from the surrounding industries often obscured the beacon of the 1859 light, it served as the primary lighthouse in Chicago until 1893. In 1893 a brick-lined cast iron tower was constructed on the original section of the outer breakwater (as seen on the map above).

Following the extension of the breakwater in 1917, the tower of the 1893 lighthouse was relocated to its present site and its adjoining buildings were constructed the following year. The lighthouse is seen above in the 1930s.

The light tower now standing on the breakwater in the Chicago Harbor was constructed in 1893 and originally stood on the end of North Pier. Details of the light tower's construction were fully documented in the *Annual Report of the Light House Board* of 1893. The Board reported that, "erection of the metalwork commenced in March of 1893 and by the end of June the base course, with the first and second story stave and vestibule were in place and the brick lining of the basement was completed." The report concluded that the light would be in working order by the Fall of 1893. The Chicago Harbor Lighthouse and its fog signal were put into service on the night of November 9, 1893.

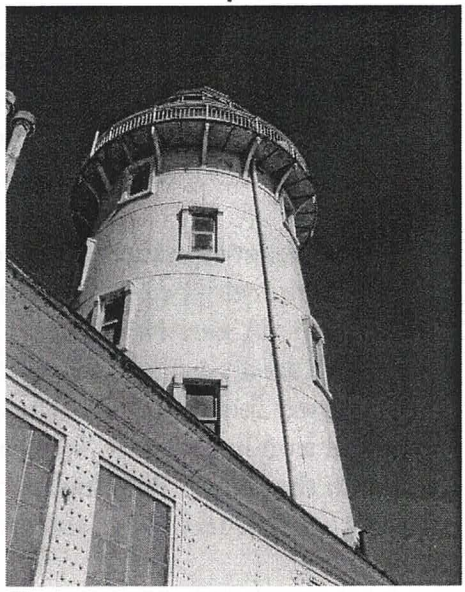
Equipped with a powerful lens to cast a bright beacon of light, the Chicago Harbor Lighthouse was classified as a "third order light." There are six orders of lighthouse lenses, with the greatest strength lenses referred to as "first order" and are strictly reserved for ocean lights. Chicago Harbor Lighthouse's innovative illuminating device, called a Fresnel lens, was exhibited by the Lighthouse Service at the Columbian Exposition of 1893. The Fresnel lens— named after its inventor, French physicist Augustin Fresnel— used the refractive and reflective properties of glass prisms to intensify a beacon of light. The lens contained a single lamp fueled by kerosene, which created the source of light.

With a 1917 renovation of the breakwater, it was determined that a lighthouse was needed at that location to guide vessels around its southern extremity into the harbor. To avoid the expense of building a completely new structure, the federal government appropriated $88,000 for the relocation and rebuilding of the 1893 cast-iron tower of the Chicago Harbor Lighthouse on a new site at the south end of the north arm of the extended exterior breakwater. At this time the 24-year-old lighthouse was moved out to its present location, and the light was first shown from the new position on the night of August 1, 1918. The large light station included a keeper's dwelling and an oil room. One-story structures adjoining the light tower housed at one time a fog-signal (south building) and a boathouse (north building) and were constructed shortly after the tower was moved to the breakwater.

Throughout the 1920s the Chicago Harbor Lighthouse was continually outfitted with the most technologically superior equipment in navigation aid. In 1925 the light's fog signal was upgraded to a "Type-F diaphone," a new type of fog signal which produced sound almost one hour faster than the light's original steam-powered locomotive whistle. This state-of-the-art signal impressed mariners with its penetrating sound, but Chicagoans who lived and worked nearby were much less enthusiastic. One businessman complained, "That's the damned-est outrageous nuisance and someone ought to hang for it." By the 1930s and 1940s with the increased use of electronic

The Chicago Harbor Lighthouse is set atop a stone-faced pier constructed of Bedford bridge stone (seen above). Constructed in 1893, the brick-lined cast iron conical light tower of the Chicago Harbor Lighthouse is a significant example of late nineteenth-century lighthouse construction. Details such as the "watch deck" and brackets (seen at the right) are representative of lighthouse construction during the period.

As a distinctive visual feature, the lighthouse continues to mark the harbor for thousands of mariners and recreational boaters on Lake Michigan.



navigational aids, including automated beacons, radar, and radio signals, the light took a quieter, but no less active role, in providing navigational aid to vessels entering the port. In 1979 the Chicago Harbor Lighthouse was fully automated. Today it continues to operate as an unmanned beacon.

BUILDING AND SITE DESCRIPTION

Slightly south and approximately 2,000 feet east of Navy Pier, the Chicago Harbor Lighthouse is situated on the southern-tip of the mile long breakwater. Its foundation extends deep beneath the water's surface and is comprised of a timber crib filled with ballast stone placed on a rubble foundation. A steel casing is secured to the crib below the water level and is encased in concrete. Set atop the foundation is a reinforced concrete structure that measures 44 by 65 feet in plan and 20 feet high. This base was described in a 1917 report of the Lighthouse Board as a "stone faced pier" constructed of "Bedford bridge stone" and concrete.

The basement contains rooms for storage of fuel and other supplies and serves as the base for the white conical tower and the one-story red-roof buildings that curve around the tower. A narrow walkway around the perimeter of the base is enclosed with wrought iron posts and a half-inch chain railing. Two one-story buildings adjoining the light tower feature bright red standing-seam hipped roofs. The primary structure, the conical iron light tower, is covered with a cast iron shell measuring five-eighths of an inch in thickness. Punctuated by an offset pattern of narrow rectangular windows, the tower rises 30 feet above the roofline of the adjoining structures.

Lighthouse builders learned early on that that flat sides receive the full force of a storm, while a round light tower breaks the forces of the wind and water. The conical tower of the Chicago Harbor Lighthouse features this round design. The cast iron covered brick-lined tower measures 23 feet in diameter at its base, tapering to 18 feet in diameter at the top of its shaft. Because the tower was constructed first and was later embraced by the curving edges of the red-roof buildings, the tower walls are flush with the walls of its adjoining buildings. A large door punctuates the base of the tower and rests on the concrete foundation. From its base, the light tower rises five storys to a watch deck that is supported by cast-iron brackets. The narrow walkway, surrounded by a white metal railing, encircles the base of the lantern room. Atop the lantern room is another narrow walk called the lantern deck. A ten-sided cast iron and glass beacon featuring a black metal roof topped by a ventilating ball completes the light tower. The light tower produces a focal plane of 82 feet above the mean lower water level.

When the lighthouse was staffed, each of the three lightkeepers had a small room in the light tower. They reached their rooms by the spiral stairway that winds its way to the beacon and horn at the top of the tower. Originally the tower was equipped with a Fresnel lens; however, the lens has since been replaced with two more modern optics that rotate, sending a distinctive flash of red light, every 5 seconds. On a clear day the beacon is visible for 24 miles.

CRITERIA FOR DESIGNATION

According to the Municipal Code of Chicago (Sect. 2-120-620 and -630), the Commission on Chicago Landmarks has the authority to make a preliminary recommendation of landmark designation for a building, structure, object, or district if the Commission determines it meets two or more of the stated "criteria for landmark designation," as well as possesses a significant degree of its historic design integrity.

The following should be considered by the Commission on Chicago Landmarks in determining whether to recommend that the Chicago Harbor Lighthouse be designated as a Chicago Landmark.

Criterion 1: Critical Part of the City's History

Its value as an example of the architectural, cultural, economic, historic, social, or other aspect of the heritage of the City of Chicago, State of Illinois, or the United States.

- The Chicago Harbor Lighthouse and its predecessors played a significant role in the development of Chicago, Illinois, and the Lower Lake Michigan basin by transforming the southern end of the lake from a treacherous shore to a safe and reliable artery of commerce.

- An important navigational marker for vessels entering and leaving the important and busy port of Chicago, the Chicago Harbor Lighthouse is typical of what was one of the most commercially valuable navigational aids in the lake-based shipping industry.

- A lighthouse has been a feature of the Chicago Harbor since 1832 to the present day, and the Chicago Harbor Lighthouse symbolically marks the historically pivotal point where the United States' maritime transportation network connected the East Coast, the Great Lakes, and ultimately the Gulf Coast, creating one of America's most commercially important and highly traveled corridors over water— and establishing Chicago as the commercial and economic center of the Midwest.

Criterion 4: Important Architecture

Its exemplification of an architectural type or style distinguished by innovation, rarity, uniqueness, or overall quality of design, detail, materials, or craftsmanship.

- Constructed in 1893, the brick-lined cast iron conical light tower of the Chicago Harbor Lighthouse is a significant example of late nineteenth-century lighthouse construction, exhibiting the details of design representative of the period.

- The Chicago Harbor Lighthouse is the only surviving example of the unique lake coastal light station type in Chicago and one of only two such examples that remains in Illinois.

Criterion 7: Unique Visual Feature

Its unique location or distinctive physical appearance or presence representing an established and familiar visual feature of a neighborhood, community, or the City of Chicago.

- The image of the Chicago Harbor Lighthouse, with its crisp white conical tower rising between two red-roofed buildings set against a background of deep blue, is a beautiful and familiar sight along Chicago's northern shoreline.

- As a distinctive visual feature, the Lighthouse continues to mark the harbor for thousands of mariners and recreational boaters on Lake Michigan and is a symbol so closely associated with Chicago's lakeshore that it is frequently featured in postcards and on television.

Integrity Criterion

The integrity of the proposed landmark must be preserved in light of its location, design, setting, materials, workmanship and ability to express its historic community, architectural or aesthetic interest or value.

The Chicago Harbor Lighthouse maintains a high degree of integrity. As was a common practice in the history of lighthouses, the original 1893 light tower of the Chicago Harbor Lighthouse was relocated to its current location in 1917 to better serve the needs of the harbor. For over seventy-five years, the lighthouse tower and its adjoining buildings have stood on their present location and collectively retain their important historic relationship to the harbor. Details of design, craftsmanship, and important architectural features, such as the lantern room, all representative of late nineteenth-century lighthouse construction, remain intact. Minor modifications to the windows of the base buildings have occurred, including the installation of glass block windows in the original window openings.

SIGNIFICANT HISTORICAL AND ARCHITECTURAL FEATURES

Whenever a building, structure, object, or district is under consideration for landmark designation, the Commission on Chicago Landmarks is required to identify the "significant historical and architectural features" of the property. This is done to enable the owners and the public to understand which elements are considered most important to preserve the historical and architectural character of the proposed landmark.

Based on its preliminary evaluation of Chicago Harbor Lighthouse, Commission staff recommends that the significant features be identified as:

- all exterior building elevations, including rooflines.

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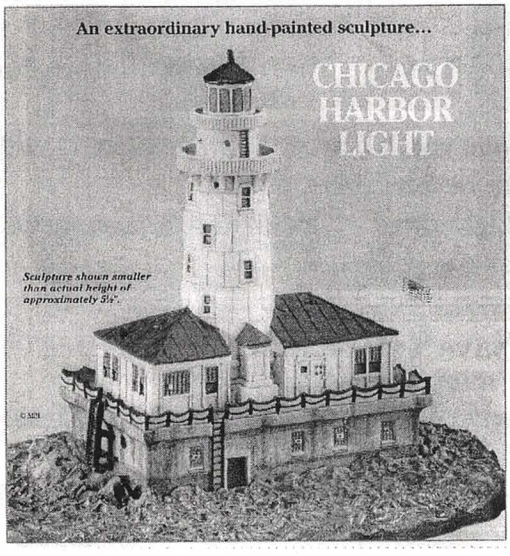

The Chicago Harbor Lighthouse is has become so closely associated with Chicago's lakeshore that it is commonly featured on souvenirs, including postcards (above) and other collectibles (left).

ACKNOWLEDGMENTS

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From Randall: 5 (left).
The Chicago Historical Society: 7 (top left).
From the United States Lighthouse Board Annual Report 1893: 7 (top right).
United States Coast Guard: 7 (bottom), 9 (top left).
Don Freese: 9 (bottom).
Postcard Factory, Inc.: 14 (top).
Danbury Mint Advertisement: 14 (bottom).

The Commission on Chicago Landmarks, whose nine members are appointed by the Mayor, was established in 1968 by city ordinance. It is responsible for recommending to the City Council that individual buildings, sites, objects, or entire districts be designated as Chicago Landmarks, which protects them by law. The Commission is staffed by the Chicago Department of Planning and Development, 33 N. LaSalle St., Room 1600, Chicago, IL 60602; (312-744-3200) phone; (312-744-2958) TTY; (312-744-9140) fax; web site, http://www.cityofchicago.org/ landmarks.

This Preliminary Summary of Information is subject to possible revision and amendment during the designation proceedings. Only language contained within the designation ordinance adopted by the City Council should be regarded as final.